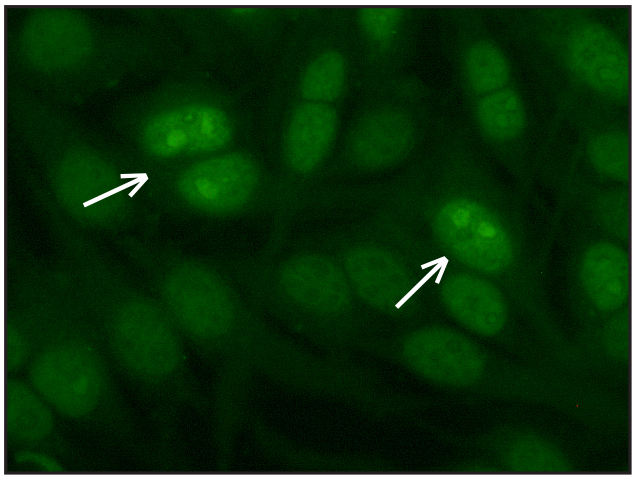
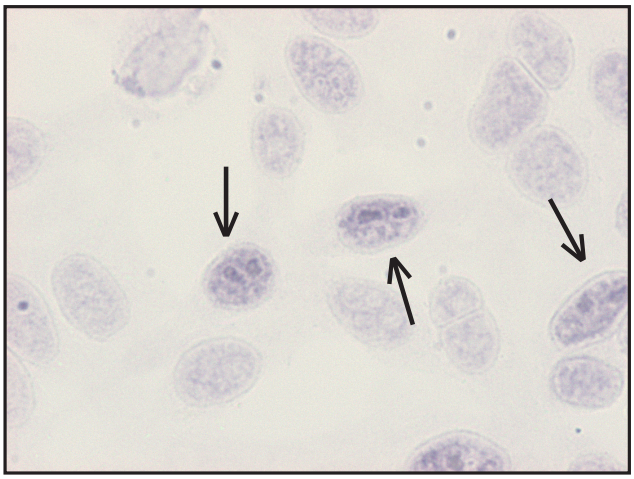
HEp-2000® FA & Colorzyme® ANA Slides with Positive SSA+ Patterns

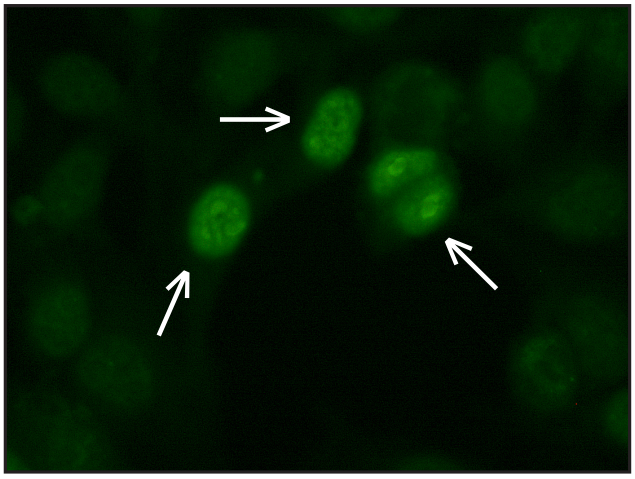
Arrows pinpoint SSA+, hyperexpressing cells.



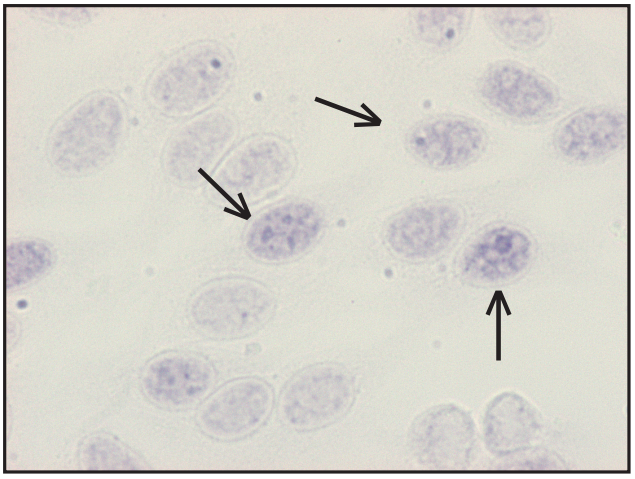
6355-B, FA



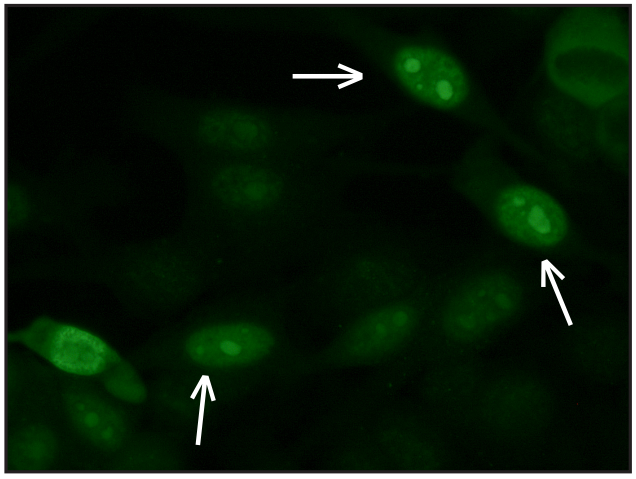
6355-B, Colorzyme®



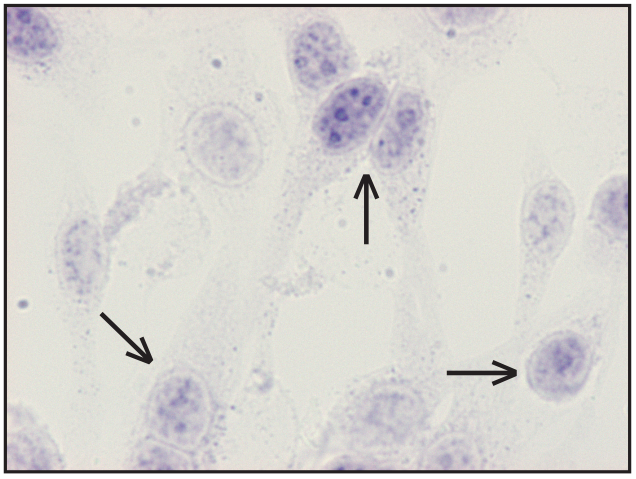
6355-C, FA



6355-C, Colorzyme®



6355-D, FA



6355-D, Colorzyme®

These three samples illustrate some of the differences laboratories occasionally observe with anti-SSA/Ro positive samples. They demonstrate that by using HEp-2000® as the ANA screen the laboratory can identify antibodies that would have been missed in follow-up testing.

These samples were sent to IC technical support because they were anti-SSA/Ro positive on HEp-2000®, as indicated by the arrows pointing to the hyperexpressing cells, but negative for anti-SSA/Ro with the ELISA ENA assay used in the laboratory (Orgentec). They were positive for anti-SSA/Ro using the RELISA® ENA system.

Had the laboratory been using standard HEp-2 and their current ELISA, these samples would have been reported as ANA positive, speckled pattern, and ENA negative; results which have different clinical ramifications than the true results.

Using HEp-2000® allowed the laboratory to get more accurate results to the clinician sooner without doing any additional work.

Q & A:

How do we know the HEp-2000® SSA/Ro results are correct?
Several publications have made it very clear that the false positive rate for the SSA/Ro pattern is extremely low with one published study calculated the specificity of the SSA/Ro pattern at over 99% (1). Failure of follow-up testing to confirm the anti-SSA/Ro pattern has been shown to be due to issues with the follow-up testing rather than HEp-2000® (1, 2).

Why didn't the other ELISA detect the anti-SSA/Ro antibodies?
There are several possibilities some of which are discussed in the above references. These possibilities include differences in the sources of the antigen(s) used in the respective assays, differences in sensitivities of the assays due to antigen concentration differences and differences in conjugate specificities.

Will HEp-2000 detect all SSA/Ro samples?
No single assay is 100% sensitive for anti-SSA antibodies. It is well documented that increasing the number of testing methods increases the sensitivity for detecting anti-SSA/Ro antibodies (3). In a recently published article HEp-2000® did detect anti-SSA/Ro antibodies missed by other slide based methods (4).

References:

1. Fritzler MJ, Hanson C, Miller J, Eystathioy T. Specificity of autoantibodies to SS-A/Ro on a transfected and overexpressed human 60 kDa Ro autoantigen substrate. *J.Clin.Lab.Anal.* 2002;16:103-108.

2. Bossuyt X, Meurs L, Mewis A, Mariën G, Blanckaert N. Screening for autoantibodies to SS-A/Ro by indirect immunofluorescence using HEp-2000* cells. *Ann Clin Biochem.* 2000;37:216-219.

3. Morozzi G, Bellisai F, Simpatico A, et al. Comparison of different methods for the detection of anti-Ro/SSA antibodies in connective tissue diseases. *Clin.Exp.Rheumatol.* 2000;18:729-731.

4. Bossuyt X, Frans J, Hendrickx A, Godefridis G, Westhovens R, Marien G. Detection of Anti-SSA Antibodies by Indirect Immunofluorescence. *Clin Chem.* 10 7 2004;50(12):2361-2369.

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